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Synopsis for Ph.D. Registration

on

An Indepth Analysis of Green Finance of Banking Sector : A Case Study of State Bank of India & HDFC Bank in Ranchi District

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1. Introduction :

"Go Green" has become the tagline for all fields, including political,ecological, environmental, and socio-economic. With a focus on two key areas—"green" and "finance"-green finance, also known as sustainable finance, seeks to integrate environmental protection into financial gains and improve ecological balance to achieve sustainable resource use. Large sums of money from both public and private sources are needed to successfully implement the Green Finance initiative.In India and around the world, green finance serves as a roadmap for sustainable investment. It is rapidly evolving as the highest concern for public funding in order to achieve sustainable economic growth and support the Sustainable Development Goals established by the United Nations. Proper information disclosure through management information systems, as well as greater shareholder support and coordination, would lead to better and more sustainable economic development. There are various investment arrangements that can be used to wrap green financing. Because it links the financial sector, environmental enhancement, and economic growth, green finance is a key component of low carbon green growth.

"Green finance" is a crucial component that bridges the gap between "knowing" and "doing" in the shift to green industry. The majority of green industry business models are non-traditional, and all green industrial proposals are financially driven. As a result, funding these green trade initiatives may be difficult or unappealing to traditional lenders.The environment is now a crucial component of any nation's sustainable economic growth in the current global environment. Both developed and developing nations can guarantee the sustainable growth of the financial sector by implementing green finance (GF).The financing programs are intended to focus public and private sector investment motivations on climate change mitigation and environmentally friendly projects. For governments and policymakers in developed economies, the idea has taken center stage. In developing nations, it is still a novel idea.

1.1 Green Finance : Defined

The funding of green growth is referred to as "Green Finance." This phenomenon blends the concepts of business and finance with eco-friendly practices. Depending on the participant, green finance can mean different things. In general, it refers to refraining from endorsing any enterprise or activity that might harm the environment now or in the future. Financial incentives, a desire to

protect the environment, or a combination of the two may drive green finance. The term "Green Finance" has no exact definition. Growth that results from the balance of the economy and the environment is known as "Green Growth".It deliberately encourages the development of renewable energy sources, environmental pollution prevention initiatives, and green industry. Its objective is to achieve a low-carbon economy. Three contemporary threats to the global economy—climate change, energy constraints, and the financial crisis—can be addressed by green growth. Financial support for green growth that drastically reduces emissions of greenhouse gases and air pollutants is known as "green finance." Green finance is funding economic and industrial development while lowering greenhouse gas emissions and other environmental contaminants."Is to increase the level of financial flows (from banking, micro-credit, insurance, and investment) from the public, private, and not-for-profit sectors to sustainable development priorities," according to the UN Environment Programme's definition of green financing. The investment program for environmentally friendly projects is known as "green finance." This instrument was created with the intention of maximizing the potential for revenue-generating projects and capitalizing on the most suitable sources of debt and equity. A market-based investment initiative called "green finance" aims to maximize the use of environmental programs to influence corporate decisions and policies. Government initiatives will require significant investment over the next 20 years, with the private sector's contribution to demand being significantly higher than it is for the current level of government financial intervention. Funds going toward environmental goods, policies that support the growth of a more sustainable economy, and projects and efforts related to sustainable development. Climate financing is a subset of green finance, although it is not the only one. It also encompasses a broader range of additional environmental goals, like biodiversity preservation, water cleanliness, and industrial pollution control.

The goal of Green Finance is to boost the amount of money flowing to sustainable development priorities from the public, private, and non-profit sectors (from banking, microcredit, insurance, and investment). Better risk management for the environment and society, seizing opportunities that offer both environmental benefit and a respectable rate of return, and increased accountability are all important components of this. Changes in national regulatory frameworks, harmonizing public financial incentives, increasing green financing from various sectors, aligning public sector financing decision-making with the environmental goal of the SDGs,

increasing investment in clean and green technologies, financing for climate-smart blue economies and sustainable natural resource-based green economies, increasing the use of green bonds, and more are some ways to promote green financing. The investment program for environmentally friendly projects is known as "Green Finance." This instrument was created with the intention of maximizing the potential for revenue-generating projects and capitalizing on the most suitable sources of debt and equity. A market-based investment initiative called "green finance" aims to maximize the use of environmental programs to influence corporate decisions and policies. Government initiatives will require significant investment over the next 20 years, with the private sector's contribution to demand being significantly higher than it is for the current level of government financial intervention.[1]

1.2 History of Green Finance :

In order to raise awareness of the environmental program within the banking sector, UNEP partnered with a group of commercial banks to establish the United Nations Environment Program Finance Initiative (UNEP FI) in 1992. Among UNEP and the economic region, the UNEP Finance Initiative is a special company. It could be considered Green Finance's original concept. Subsequently, the initiative continues to engage more financial institutions in close discussions about the relationship between environmental protection and sustainable economic development, including commercial and investment banks, insurers, and fund managers. It seeks to incorporate ecological factors into current financial services and procedures. As of right now, over 40 countries and about 190 financial institutions have signed the UNEP FI statement. Institutions that sign the UNEP FI statement also have the opportunity to influence the sustainable finance agenda in their own development and gain knowledge from the network about the newest trends and practices for grabbing green growth opportunities.

1.3 Benefits of Green Finance:

- Promotes the development of environmentally friendly infrastructure and the diffusion of technologies:- Governments in developing nations are building infrastructure to boost a nation's competitiveness, enhance long-term resource management, and direct private sector investment into regional green markets.

- Generates a Comparative Advantage :- Low-carbon green development may inevitably become a mandatory approach in response to the growing challenges posed by climate change and other environmental and economic issues. When environmental regulations tighten, you will have a competitive edge if you expand green financing.
- Increases the Value of the Business :- By increasing and promoting their involvement in green financing, businesses can increase the value of their portfolio. It gives their business a competitive advantage and draws in more eco-aware clients and investors.
- Improves Economic Opportunities :- Governments that support green finance help shield their communities from resource scarcity. They accomplish this by establishing and promoting regional markets for renewable energy and breaking into new markets with significant job opportunities.

1.4 Types of Green Finance:

A variety of financial instruments intended to support environmentally sustainable projects and initiatives are referred to as "green finance." These tools assist in allocating funds to initiatives that benefit the environment.

- **Green Bonds**: are debt securities where the proceeds are exclusively used to finance or refinance environmentally friendly. Green bonds are financial instruments used to raise money for environmentally friendly projects such as adaptation and mitigation of climate change. To fund public sector projects that lower carbon intensity, the Indian government intends to issue sovereign green bonds.
- **Green loans** are financial products in which the borrower pledges to use the money for projects that will benefit the environment.
- **Green Mutual Funds and Exchange-Traded Funds (ETFs):** It is a type of investment vehicle where investors pool their funds to support businesses and initiatives that advance environmental sustainability. investment funds that prioritize businesses or initiatives with a solid environmental record.
- **Green Micro-finance** : Services created especially to assist environmentally friendly projects; frequently aimed at small enterprises and entrepreneurs in sustainable industries.With an emphasis on encouraging ecologically friendly behaviors, green

microfinance is a type of financial service that offers microloans to low-income people and communities. By providing incentives for the impoverished to adopt more sustainable practices, green microfinance seeks to improve environmental conditions.

- **Green Insurance:** Green insurance plans are those that offer low-cost risk coverage along with improved coverage for eco-friendly items to lessen the effects of climate change and promote ethical business practices.
- **Green Insurance Products-**Are insurance plans designed to protect against environmental project risks or to encourage companies to use sustainable practices. Insurance plans that promote green projects and environmental sustainability. Using recycled materials, installing green building systems, and repairing rather than replacing can all be encouraged by green insurance products. The design, manufacture, and use of sustainable products, as well as the liability related to them, can be covered by green insurance products.
- Green car loans
- Green mortgages
- Green home equity loan
- Green certificate of deposits
- Green cards

1.5 Green Finance in Banking:

Green finance has become more relevant in the banking industry as a result of increased awareness of what it is. In this respect, commercial and investment banks are beginning to act. Among the measures is the integration of environmental considerations into bank governance and strategy. Additionally, it involves raising money for particular green assets through capital markets operations like green bonds, loan origination, and the provision of credit and savings products. Numerous global initiatives, such as the Sustainable Banking Network and the principles for responsible banking are propelling this development. Additionally, Multilateral Development Banks (MDBs) are crucial in raising global climate funds and boosting financial leverage for projects that are low-carbon and climate-resilient. They accomplish this by improving the planning, preparation, structure, financing, and de-risking of both public and private investments. Many have made audacious promises to ensure that their

loan portfolios fund conservation initiatives and that their investment decision-making processes take social implications and natural capital into account.

1.6 Sustainable Development Goals (SDG)

In September 2015, 193 nations adopted the 17 Sustainable Development Goals (SDGs) as a comprehensive framework for policy through 2030 under the United Nations' auspices. In general, the five SDG pillars—People, Prosperity, Planet, Peace, and Partnership-are in line with IMF's involvement in the SDGs.

The United Nations adopted the Sustainable Development Goals (SDGs), commonly referred to as the Global Goals, in 2015 as a global call to action to eradicate poverty, safeguard the environment, and guarantee that everyone lives in peace and prosperity by 2030.The integration of the 17 SDGs acknowledges that development must balance social, economic, and environmental sustainability and that actions taken in one area will impact results in other areas. Nations have pledged to give the most progress to those who are most disadvantaged. The SDGs aim to eradicate discrimination against women and girls, AIDS, hunger, and poverty. The IMF is dedicated to the SDGs and is helping its members implement them in areas that are pertinent to its mission of inclusive and sustainable economic growth and financial stability.[2]

There are **17 SDGs** which are briefly stated below :

a. **Goal 1**: **No Poverty**

   The challenge of eradicating poverty remains a significant issue, despite a 50% decrease in extreme poverty between 1990 and 2015. As of 2015, 736 million people lived on less than $1.90 a day, lacking basic necessities like food, clean water, and sanitation. Women are more likely to be impoverished due to lower education, employment, and property ownership. To address this, national definitions aim to reduce poverty by at least half by 2030, establish suitable social protection programs, and ensure equal access to economic resources, basic services, inheritance, land, natural resources, and financial services, with a focus on the poor and vulnerable.

b. **Goal 2: Zero Hunger**

   The SDGs aim to eradicate hunger and malnutrition by 2030, focusing on sustainable farming, supporting small-scale farmers, and ensuring equitable access to markets, land,

and technology. International cooperation is crucial for technology and infrastructure investments.

c. Goal 3: Good Health & Well-Being

The SDGs aim to eradicate hunger and malnutrition by 2030, focusing on sustainable farming practices, supporting small-scale farmers, and ensuring equitable access to markets, land, and technology. International cooperation is crucial for ensuring investments in technology and infrastructure to boost agricultural productivity. Promote mental health and well-being while preventing and treating non-communicable diseases to cut premature mortality from these conditions by one-third by 2030. 40% of people lack social protection, and 400 million people lack access to basic healthcare. Boost efforts to prevent and treat substance abuse, including the dangerous use of alcohol and narcotic drug abuse.

d. Goal 4: Quality Education

The goal is to achieve inclusive, high-quality education for all by 2030, aiming to eradicate wealth and gender inequalities, guarantee universal access to high-quality higher education, and provide equal access to affordable vocational training. This includes teaching students about human rights, gender equality, sustainable development, sustainable lifestyles, peace, non-violence, global citizenship, and cultural diversity's role in sustainable development. The goal is to ensure all students have the knowledge and abilities necessary to advance sustainable development.

e. Goal 5: Gender Equality

The goal is to achieve inclusive, high-quality education for all by 2030, aiming to eradicate wealth and gender inequalities, guarantee universal access to high-quality higher education, and provide equal access to affordable vocational training. This includes teaching students about human rights, gender equality, sustainable development, sustainable lifestyles, peace, non-violence, global citizenship, and cultural diversity's role in sustainable development. The goal is to ensure all students have the knowledge and abilities necessary to advance sustainable development.

f. Goal 6 : Clean Water and Sanitation

Over 40% of people worldwide suffer from water scarcity, a trend expected to worsen as temperatures rise. Despite 2.1 billion people improving water sanitation since 1990, more countries are experiencing water stress, worsened by drought and desertification. By 2050, at least one in four people will experience recurring water shortages. To address this, it is crucial to ensure universal access to safe, affordable drinking water and sanitation, with a focus on women, girls, and vulnerable populations.

g. Goal 7: Affordable & Clean Energy

Between 2000 and 2018, the percentage of people with electricity increased from 78% to 90%, while the number without it decreased to 789 million. However, the demand for affordable energy is increasing, and a fossil fuel-based economy is causing climate change. To achieve SDG 7 by 2030, investing in Solar, Wind, and Thermal Power, increasing energy productivity, and modernizing technology are crucial for development and environmental benefits.

h. Goal 8: Decent Work And Economic Growth

Over the past 25 years, extreme poverty has decreased, with the middle class now accounting for 34% of jobs in emerging nations. However, slower growth, increasing inequality, and job shortages persist due to the global economy's improvement. The International Labour Organization estimates that over 204 million people were unemployed in 2015. To achieve the Sustainable Development Goals (SDGs), promoting entrepreneurship, job development, and ending slavery and forced labor are crucial.

i. Goal 9: Industry, Innovation And Infrastructure

Innovation and infrastructure spending are crucial for economic expansion, especially as over half of the world's population lives in cities. The development of new industries, information technology, mass transit, and renewable energy is essential for long-term solutions to environmental and economic problems. Investing in scientific research and innovation, as well as supporting sustainable industries, is essential for sustainable development.

j. Goal 10 : Reduced Inequalities

Income inequality is increasing globally, with the rich holding 40% of global revenue and the poor receiving only 2-7%. In developing nations, inequality has risen by 11%. Global solutions include promoting development aid, international direct investment,

strengthening financial market regulation, and facilitating secure migration and mobility to bridge this gap. Population growth also contributes to the issue.

k. Goal 11: Sustainable Cities and Communities

Urbanization is crucial for sustainable development, as two-thirds of the world's population, or 6.5 billion people, will live in cities by 2050. Slums are becoming more prominent due to migration and population growth, especially in developing countries. Building resilient societies, providing secure housing, and fostering business and employment opportunities are essential for sustainable cities. Investments in public transportation, green public areas, and inclusive urban planning are necessary. By 2030, everyone should have access to secure, affordable, and sustainable transportation systems, including increasing road safety and addressing the needs of women, children, people with disabilities, and the elderly.

l. Goal 12: Responsible Consumption and Production To achieve sustainable development and economic prosperity, we must significantly reduce our ecological footprint by altering our resource and goods use. Agriculture consumes the most water globally, with irrigation accounting for over 70% of freshwater use. Effective resource management and proper waste disposal are crucial. Promoting recycling and waste reduction among businesses, industries, and consumers is equally important as helping emerging nations transition to sustainable consumption patterns by 2030.

m. Goal 13: Climate Change

Climate change is causing severe consequences worldwide, with greenhouse gas emissions increasing by over 50% since 1990. The climate system is changing, and if left unaddressed, permanent effects could occur. Climate-related disasters cause billions of dollars in economic losses annually, and geophysical catastrophes, which are 91% climate-related, result in 1.3 million deaths and 4.4 billion injuries between 1998 and 2017. The goal is to raise $100 billion annually by 2020 to help poor nations achieve low-carbon development and climate change adaptation goals.

n. Goal 14: Life Below Water

The oceans' temperature, chemistry, currents, and life are crucial for maintaining Earth's habitability for humans. Overfishing affects 30% of the world's fish stocks, impacting over three billion people's livelihoods. The Sustainable Development Goals (SDGs) aim

to manage marine and coastal ecosystems sustainably and prevent pollution. International law can help reduce issues affecting seas by improving conservation and sustainable use of ocean-based resources. Addressing ocean acidification and promoting sustainable use of ocean-based resources is essential for a sustainable future.

o. Goal 15: Life on Land

Earth is crucial for human life, providing 80% of nutrition and income. Agriculture is a significant source of income, and 30% of the Earth's surface is covered by forests. However, 13 million hectares of forests are lost annually, and 3.6 billion hectares of drylands become desertified. This disproportionately affects impoverished communities. Despite 15% of protected land, biodiversity is under threat, with nearly 7,000 species being illegally traded. The goal is to combat desertification, rehabilitate degraded land and soil, and work towards a world free of land degradation by 2030.

p. Goal 16: Peace, Justice and Strong Institutions

The SDGs aim to significantly reduce all forms of violence, and work with governments and communities to end conflict and insecurity. Promoting the rule of law and human rights are key to this process, as is reducing the flow of illicit arms and strengthening the participation of developing countries in the institutions of global governance. Encourage and implement nondiscriminatory legislation and regulations for sustainable growth.

q. Goal 17: Partnership for the Goals

The SDGs require robust international collaboration and partnerships, with official development assistance falling short of the goal of US$147 billion in 2017. Increased funding is needed for conflict-related or natural disaster-related humanitarian issues. By 2030, efforts should focus on creating sustainable development progress metrics beyond GDP and aiding developing nations in statistical capacity-building.

1.7 Sustainable Development Goals (SDG) & India

The 2030 Agenda for Sustainable Development, which was endorsed by 193 Member States at the UN General Assembly Summit in September 2015 and went into effect on January 1, 2016, includes the 17 SDGs and 169 objectives. "Leave No One Behind" is the universality concept at the heart of our global plan for 2030. All people everywhere must be a part of development in all its forms, and everyone's involvement—especially that of the most marginalized and vulnerable-

must be encouraged. This all-encompassing goal acknowledges that concentrating solely on economic growth is no longer adequate; instead, it is necessary to prioritize safer and more prosperous planets, as well as more equitable and equitable societies. India plays a crucial role in deciding if the SDGs are successful worldwide. "A sustainable development of one-sixth of humanity will be of great consequence to the world and our beautiful planet," Prime Minister Narendra Modi said at the 2015 UN Sustainable Development Summit. There will be more hope and fewer obstacles in this world, and there will be greater assurance of its success. Coordinating the SDGs, mapping initiatives relevant to the SDGs and their targets, and identifying lead and supporting ministries for each target are all tasks assigned to NITI Aayog, the Government of India's leading think tank. Furthermore, negotiations for creating national indicators for the SDGs have been spearheaded by the Ministry of Statistics and Programme Implementation (MoSPI).[3]

1.8 State Bank of India

With its headquarters located in Mumbai, Maharashtra, State Bank of India (SBI) is a multinational public sector bank and statutory body that provides financial services. As the only Indian bank on the Fortune Global 500 list of the world's largest corporations for 2024, it is ranked 178th and is the 48th largest bank in the world by total assets. With a 25 percent market share in loans and deposits overall and a 23 percent market share in assets, it is the biggest public sector bank in India. With almost 250,000 workers, it ranks as India's tenth largest employer. The company had 55 seats in Forbes Global 2000 in 2024.

SBI has been recognized as the most trusted bank by Indians for generations due to its rich history and legacy spanning more than 200 years. With more than Rs. 61 trillion in assets, SBI is the biggest bank and financial services company in India. Through our extensive network of more than 22,500 branches, 63,580 ATMs/ADWMs, and 82,900 BC outlets, we provide services to more than 50 crore customers. Our unwavering focus on innovation and customer centricity stems from the Bank's core values, which are service, transparency, ethics, politeness, and sustainability. Through its numerous subsidiaries, including SBI General Insurance, SBI Life Insurance, and SBI Mutual, the Bank has effectively diversified its business operations. With 241 offices in 29 foreign countries, it has expanded its global reach and works across time zones. As

it develops, SBI keeps redefining banking in India with the goal of providing sustainable and ethical banking solutions.

1.9 History of SBI

The establishment of the Bank of Calcutta (later renamed the Bank of Bengal) on June 2, 1806, marks the beginning of the State Bank of India's history. The Bank of Bombay, which was established on April 15,1840, and the Bank of Madras, which was established on July 1,1843, were the other two Presidency banks, along with the Bank of Bengal. Royal charters led to the incorporation of all three Presidency banks as joint stock companies. These three banks held the sole authority to print money until 1861, when the Government of India acquired this authority through the Paper Currency Act. On January 27, 1921, the Presidency banks merged, and the newly restructured banking organization was renamed Imperial Bank of India. Despite the absence of government involvement, the Imperial Bank of India continued to operate as a joint stock company. The Reserve Bank of India, the country's central bank, obtained a majority stake in the Imperial Bank of India in accordance with the terms of the State Bank of India Act of 1955. The Imperial Bank of India changed its name to the State Bank of India on July 1,1955. Since the Reserve Bank of India is the nation's banking regulator, the Government of India purchased the RBI's interest in SBI in 2008 in order to eliminate any potential conflicts of interest.[4]

Vision- Be the Bank of choice for a transforming India

Mission- Committed to Providing Simple, Responsive and Innovative Financial Institutions

Values – Service | Transparency |Ethics | Responsibility | Politeness | Sustainability

1.10 HDFC Bank

The full form of HDFC Bank is Housing Development Finance Corporation Bank. Mumbai is the headquarters of HDFC Bank, an Indian banking and financial services organization. As of May 2024, it is the tenth-largest bank in the world by market capitalization and the biggest private sector bank in India by assets. The HDFC Bank, State Bank of India, and ICICI Bank have been designated as Domestic Systemically Important Banks (D-SIBs) by the Reserve Bank of India (RBI). These banks are frequently referred to as "too big to fail." With a $145 billion

market valuation as of April 2024, HDFC Bank is the third-biggest company listed on Indian stock exchanges. After acquiring the parent company Housing Development Finance Corporation, it now employs over 173,000 people, making it the sixteenth largest employer in India.

a. History of HDFC Bank : In 1994, HDFC Bank was established as a subsidiary of HDFC Ltd, which, as part of the RBI's liberalization of the Indian banking sector, was given "in principle" permission to establish a bank in the private sector.With its registered office in Mumbai, the bank opened for business in January 1995.Manmohan Singh, the Union Finance Minister at the time, opened the company's first corporate office and full-service branch at Sandoz House in Worli. The first-ever voluntary bank merger in India took place in February 2000 when Times Bank and HDFC Bank joined forces.The Times Group, the biggest media conglomerate in India, founded Times Bank. Following an IPO, HDFC Bank's ADS went public on the New York Stock Exchange in July 2001. With 120 million customers, the combined company was larger than the population of Germany. The bank's workforce grew significantly as a result of the merger, reaching 177,000 employees. In terms of assets, the combined company surpassed only the State Bank of India as the second-largest bank in India.Wholesale banking, retail banking, treasury, auto loans, two-wheeler loans, personal loans, loans secured by real estate, consumer durable loans, lifestyle loans, and credit cards are just a few of the goods and services that HDFC Bank offers. Additionally, PayZapp and SmartBUY are digital products. In 2024, the business also released the Smart Wealth App.[5]

b. Mission & Values

Excellence| Customer-Focus| Product-Leadership | People| Sustainability

2. Literature Review

Kamboj Gourav (2024)[6] The study emphasizes the increasing significance of green finance in Indian public policy, pointing to advancements in financial accessibility and public awareness. The public's ignorance of the various sources of green money and the absence of a green taxonomy remain barriers, nevertheless. In order to accomplish the National Clean Development Goals and promote sustainable economic growth, the government must solve these problems and enhance information management systems. The study highlights the growing importance of

green finance in public policy in India, highlighting improvements in public awareness and financial availability. However, the lack of a green taxonomy and public awareness of different sources of green finance are still obstacles. The government must address these issues and improve information management systems to support sustainable economic growth and achieve the National Clean Development Goals.

Fathihani,et.al (2021)[7] According to the study, in order to preserve economic stability, the government needs to address environmental issues and climate change. Strengthening resilience and changing company perceptions are two of the many obstacles to the complex and uncertain implementation of a sustainable green finance system. Carbon emission reduction and eco-friendly initiatives are the main goals of green finance. Securing green finance across all sectors requires government support, sustainable operating laws, and the creation of models for green investment products and financial instruments.The implementation of a sustainable green finance system is complex and unpredictable, with challenges including strengthening resilience and shifting business perspectives. Green finance focuses on environmentally friendly projects and reducing carbon emissions. Government assistance, sustainable operating regulations, and the development of green investment goods and financial instrument models are crucial for securing green finance across all sectors.

Gincy Charles,et.al (2020)[8] The researchers in this study had concentrated on the latest trends, opportunities, challenges, and different investment avenues of green finance in India.In order to analyze the path of Green Finance and determine the goals attained thus far from the initiatives taken by the Indian government.It is evident from the analysis that in order to achieve the sustainable development goal, India must increase its contributions to infrastructure funding and concentrate more on green finance. To maintain economic growth, India must create green finance policies and products. Although India has already started making investments in green financial services and products, the current level of investment is insufficient to meet the sustainable development target. The government should appeal to both domestic and foreign investors by establishing clear and open policies and a clear green investment plan. India needs to develop green finance policies and products to sustain economic growth. By 2040, it will require $4.5 trillion in infrastructure funding. India has already begun investing in green finance products and services, but the sustainable development goal cannot be achieved with current

levels of investment. The government should establish a clear green investment strategy, clear and transparent policies, and appeal to both domestic and foreign investors.

Jha Babita,et.al (2019)[9] This study aimed to examine the role of green finance in economic growth by guiding the flow of funds from public, private, and non-profit sectors. The researcher examined different green financing avenues and suggests solutions to overcome obstacles to financing green products.This study shows Green Financing initiatives in Indian banks and organizations, focusing on the potential of green finance to fund-environmental friendly investments. It suggested blended finance to lower capital costs for private investors, and the Indian government should develop a clear green investment plan for the long run. Regulatory policies should be more open and accommodating to foster investor confidence.To encourage investor confidence, regulatory regulations should be more flexible and transparent. By directing the flow of capital from the governmental, private, and non-profit sectors, the study investigated the impact of green finance on economic growth. The researcher looked upon at several green finance options and offers ways to get over barriers to funding eco-friendly goods.

Sharif Mohd,et.al (2018)[10] The goal of this study was to solve the problems of global warming brought on by Greenhouse Gas Emissions by increasing green money at the national level. By removing obstacles and raising corporate citizens' awareness of sustainable development, India has a great chance to develop green infrastructure for green finance. Green financial services and products become essential components of relationship sustainability, as businesses are associated with the earth. Green financing is depicted in subtle elements, making it a basic part of relationship maintenance. As countries worry about pollution and environmental concerns, green money is a global concern in sustainable economic and financial development. Green projects must be identified, their status must be confirmed, waste reduction must be financed, green project financing must be increased, grassroots awareness must be raised, replication must be facilitated, trees must be planted, green building construction must be encouraged, eco-friendly products must be financed, microfinance must be expanded for low interest rates, and renewable energy sources such as solar lights and rainwater harvesting must be financed.

Vyas Manmohan (2017)[11] According to this study, by eliminating barriers and increasing corporate citizens' understanding, India can create green infrastructure for green financing. Green investing rules and portfolio-level mandates should be established by the Reserve Bank of India,

Ministry of Finance, SEBI, Insurance Regulatory and Development Authority, and Pension Fund Regulatory and Development Authority. High-yield green bonds should be a part of the fixed-income portfolio of insurance and pension funds. Initiatives to broaden and grow the green bond market, such as educating prospective borrowers and standardizing the issuing and compliance procedures, should be backed by industry specialists. The concept's potential advantages have drawn attention from international organizations, society, NGOs, employees, consumers, and regulatory authorities. In this sense, the idea of "green banking" was born out of banks' concern for environmental sustainability. The report also discusses the future potential of such projects in the Indian setting, as well as the range of green financial goods and services provided by financial institutions.

Soni G. Shriprakash,et.al (2017)[12] This research paper explores the significance of green finance in tackling economic challenges associated with global warming. Green finance has the potential to greatly lower greenhouse gas emissions and support a number of sectors, including renewable energy, banking, and agriculture. It also highlighted how important it is to finance renewable energy and environmentally friendly projects. According to this report, green money will spread around the world. Power outages and shortages brought on by India's rapid economic expansion have prompted the government to concentrate on enhancing energy efficiency and utilizing renewable resources in order to lessen dependency on imports.According to scientists and environmental specialists, greenhouse gas emissions are to blame. The author has emphasized that green financing will result in a significant decrease in greenhouse gas emissions. They demonstrated the value of green finance in a number of industries, including banking, agriculture, renewable energy, etc., which reduces illness, conserves energy, and maintains a healthy environment. They have underlined the importance of funding eco-friendly and renewable energy projects. The study anticipated that green finance will soon be well-liked in every society on the planet.This leads to frequent power blackouts and ongoing power shortages. The Indian government is putting more emphasis on methods for improving energy efficiency and using renewable sources in an effort to reduce reliance on imports in the conventional energy sector.

Parvadavardini Soundarrajan,et.al (2016)[13] This paper's goal was to examine green finance and confirm that the idea of balancing ecological degradation brought on by the atmospheric

assimilation of carbon gases is viable in Indian industries In order to counteract the ecological harm brought on by carbon dioxide absorption in Indian enterprises, this article looks at green finance, a market-based financing or investment program. Green finance, which connects the financial industry, environmental improvement, and economic growth, is an essential part of low carbon green growth. The paper discusses the latest advancements, opportunities, and challenges facing green finance. To achieve social and environmental goals, banks must make advantage of their indirect control on management and investment decisions.In addition to making direct investments in sustainable development,banks must use their indirect influence over management and investment choices to persuade the company to meet more general social and environmental objectives. As a result, the article also covered current developments as well as prospects and obstacles for green finance. India now has the chance to develop in a way that lessens the effects of environmental deterioration, which opens up a wide range of prospects for the country's financial industry.

3. Research Gap:

The recent emergence of the idea of "Green Finance" demonstrates how nations are becoming more conscious of the need to protect the environment and promote sustainable development. The majority of the literature on green finance focuses on developed economies. The literature on green finance in developing nations such as India is scarce & specially Ranchi district. The creation of green bonds and the financing of renewable energy projects were the main topics of earlier research on Green Finance in India. There is limited discussion of the other financial products and Banking that could grow as a result of green financing in Public sector Banks & Private Sector Banks in Ranchi district. Last but not least, there is conflicting consensus in the literature the regarding the impact of green finance on the banking industry's financial performance, with results ranging from favorable to unfavorable. This discrepancy emphasizes the necessity of more research into the firm-specific elements that influence these results.

4. Significance of the Study:

This study is valuable because it offers valuable insights in addressing global issues pertaining to climate change and sustainable development requires a thorough understanding of green finance in the banking industry. In their capacity as financial intermediaries, banks are essential in

coordinating resources and guiding them toward green initiatives like sustainable business practices, energy-efficient infrastructure, and renewable energy. The banking industry can reduce environmental risks and generate opportunities for economic growth that are consistent with environmental sustainability by implementing green finance strategies. Understanding how banks incorporate green finance into their operations, create cutting-edge financial products, that affects consumer and business behaviour toward sustainability depends heavily on this research. Additionally, by improving regulatory frameworks that encourage green investments and lower carbon footprints, the study will aid in the formulation of policies. Additionally, by studying improving regulatory frameworks that encourage green investments and lower carbon footprints, the study will aid in the formulation of policies. A robust financial system in the face of environmental uncertainties and the accomplishment of global sustainability goals, such as the Sustainable Development Goals (SDGs) of the UN, depend on such insights. As environmental concerns have grown on a national and worldwide scale, it is now important for the finance sector to respond to these issues. Investing in initiatives that prevent further deterioration of our natural environment is "Green Finance."

5. Objectives of the Study:

i. To examine the implementation of Green Finance initiatives by SBI and HDFC Bank in Ranchi District.

ii. To analyse the Financial Performance of SBI and HDFC Bank in relation to their Green Finance strategies.

iii. To assess the level of awareness and perception of Green Finance among Customers and Stakeholders in Ranchi.

iv. To identify the challenges faced by SBI and HDFC Bank in promoting Green Finance.

v. To evaluate the contribution of Green Finance initiatives towards Sustainable Development Goals.

6. Hypothesis of the Study:

- H0- Green finance initiatives by SBI and HDFC Bank do not significantly impact their financial performance in Ranchi District.
- H1- Green finance initiatives by SBI and HDFC Bank significantly impact their financial performance in Ranchi District.
- H0-Green finance initiatives by SBI and HDFC Bank do not significantly contribute to Sustainable Development in Ranchi District.
- H1- Green finance initiatives by SBI and HDFC Bank significantly contribute to Sustainable Development in Ranchi District.

7. Research Methodology

7.1 Research Design

The study employs a Mixed-method approach combining both Quantitative and Qualitative methodologies to provide a comprehensive understanding of green finance initiatives in SBI and HDFC Bank. This design enables an in-depth examination of financial performance, stakeholder awareness, and the contribution of Green Finance to Sustainable Development.

7.2 Research Approach

- Quantitative Approach: To analyze measurable data, such as financial performance metrics and Customer Survey Responses.
- Qualitative Approach: To gather insights from stakeholders through Interviews and Content Analysis.

7.3 Data Collection

a. Primary Data:

- Structured questionnaires will be distributed to customers and bank executives to evaluate awareness, perceptions, and effectiveness of Green Finance initiatives.
- Semi-structured interviews with financial analysts, managers, and policymakers to understand challenges and strategies in implementing Green Finance.

b. Secondary Data:

- Financial reports and annual sustainability reports of SBI and HDFC Bank.
- Government publications, industry white papers, and academic articles on Green Finance.
- Online and offline databases for historical financial data and performance metrics.

7.4 Sampling

a.Target Population:

- Customers of SBI and HDFC Bank in Ranchi District.
- Bank executives and other key stakeholders involved in Green Finance.

b. Sample Size:

300 respondents, including:

- 200 customers (100 from each bank).
- 100 bank executives and stakeholders (50 from each bank).

c. Sampling Technique:

- Stratified Random Sampling to ensure a balanced representation of respondents from both Public and Private sector banks.

d. Research Tools:

e. Survey Intrument: A structured Questionnaire using a 5-point Likert scale to measure awareness, perception, and satisfaction levels related to Green Finance initiatives.
f. Interview Guide: A semi-structured guide focusing on the challenges, strategies, and opportunities in implementing green finance.

7.5 Data Analysis Techniques

a. Descriptive Statistics: To summarize the data and understand patterns in Customers and Stakeholder responses.

b. Inferential Statistics:

- Regression analysis to evaluate the relationship between Green Finance initiatives and Financial Performance.
- Chi-Square Test to determine the association between customer awareness and adoption of green finance products.

c. Qualitative Analysis:

- Content Analysis of interview transcripts to identify recurring themes and challenges.

7.6 Data Analysis Tools

- SPSS: For quantitative data analysis, including descriptive and inferential statistics.
- NVivo: For qualitative data analysis to manage and interpret interview data.
- MS Excel: For data organization and preliminary visualization.

7.7 Research Area:

The study will focus exclusively on the Ranchi District to provide localized insights into the adoption and impact of green finance in both public and private sector banks.

8. Limitations of the Study:

There could be a lot of limitations on a study on green financing of the banking sector, including:

- *Restricted Access to Firm-Level Data*: Not all businesses, particularly privately held ones, make comprehensive information about their financing choices available to the public. This could limit the study's focus to publicly traded companies, which could limit how broadly the results can be applied.
- *Historical Data Gaps*: Since green finance is a new concept in the Indian market, data from previous years may be lacking, inconsistent, or unavailable.
- *Geographical Restrictions*: If the study is limited to banks in a particular nation or area, it might not take into consideration variations in the legal, regulatory, and financial landscapes in other areas, which would limit the findings' generalizability.

- *Quality of Data* : Due to variations in reporting practices across nations and industries or in regulatory requirements, corporate financial data may occasionally be inconsistent.
- *Regulatory Shifts*: The study period may align with notable shifts in government interventions (such as financial stimulus plans), financial market regulations, or tax laws. These changes have the potential to significantly change a bank's financing options.

9. Tentative Chapterisation

Chapter I: Introduction & Review of Literature

Chapter II: Overview of Green Finance of Banking Sector in Ranchi District.

Chapter III: Financial Performance Evaluation of SBI Bank & HDFC Bank of Ranchi District vis-a-vis Green Finance

Chapter IV: Research Methodology, Hypothesis Testing and Analysis of Data

Chapter V: Conclusion, Findings and Suggestions

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